

A LEGACY

BY SUSAN REESE

Apprenticeships are a time-honored way of passing along skills in an art, trade or craft, and many notable figures in American history began their careers as apprentices. Benjamin Franklin learned the printing trade through apprenticeship, and Paul Revere served as an apprentice in his family's silversmith business. Apprenticeships have long been an important element of career and technical education (CTE), where they traditionally incorporate systematic programs of on-the-job training led by skilled professionals, along with classroom and laboratory instruction.

Automotive Apprenticeships in Colorado at ACC

Annually about 18,000 credit and non-credit students attend Colorado's Arapahoe Community College (ACC), where more than 100 degree and certificate programs are offered at its Littleton and Parker campuses. Among those programs is the Associate of Applied Science Degree in Automotive Service Technology, which is certified by the National Automotive Technicians Education Foundation (NATEF) and taught by Automotive Service Excellence (ASE) certified instructors. The two-year program and automotive technology certificate programs prepare students for employment as professional technicians and for the ASE certification examinations.

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LEARNING

According to ACC Automotive Service Technology Director Jerry Viola, the program has recently received several impressive honors, including being featured in the national publication, *Tomorrow's Technician*, and being recognized by a special guest from Washington, D.C.

"Last April, Dr. Jill Biden visited our program and recognized it as one of the premier training programs in the country," says Viola.

Each class in the program requires five credits and 45 additional hours of hands-on and/or Web-based training in addition to scheduled class hours. The program is organized into five tracks:

- ASEP (General Motors Automotive Service Educational Program)
- CAP (Chrysler College Apprenticeship Program)
- Nissan (Nissan Denver Technician Apprenticeship Program)
- ATEC (the general apprenticeship program for professional automotive technicians)
- PACT (Honda apprenticeship program)

Since the corporate-sponsored apprenticeship programs require the student to obtain and maintain an apprenticeship position at a manufacturer dealership for the duration of the program, the ACC program faculty assists the students in finding suitable placement. In addition,

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students take Web-based manufacturer technician training courses, and their sponsoring dealerships receive training credit for the students upon their graduation with the associate degree.

Viola sees the apprenticeship component of the program as invaluable in making students what he calls "real-world savvy." As he explains, "Some things you just don't find in books, so observational education is just as important to long-standing success."

The ATEC program allows students to obtain an apprenticeship position with any dealership or independent automotive repair facility. This track also requires students to maintain an apprenticeship position in automotive repair for the duration of the program, and is a degree program only.

ACC's Automotive Service Management Certificate program is designed as an apprenticeship program for those interested in a job as an automotive service writer/consultant. ACC notes that

dealerships are particularly interested in female service writers, since women are underrepresented in the automotive service field. The Advanced Automotive Electrical/Electronics Certificate is designed as an apprenticeship program for those interested in a job as an advanced drivability specialist or those who would like to further their knowledge and training in advanced engine performance. According to ACC, dealers are particularly interested in this specialty due to the advances in technology on current model vehicles with increasing electrical/electronics devices.

Most of the major automotive manufacturers have donated to the more than \$1 million in vehicles and technology that have kept the ACC training current. The automobile companies benefit from having a pipeline of technicians who come into the workforce well prepared on today's technology, and the students graduate with the ability to work on the latest models of vehicles. Another huge bo-

nus to apprenticeship is that the students are earning money while in school. With the affordability of community college, a student can finish the program debt free, with a college degree and with two years of work experience. According to Viola, a two-year follow-up study of their graduates found them to be averaging about \$50,000 a year working in the industry. "It's a win-win-win situation," he says.

Viola sometimes refers to his program as "the Harvard of automotive training," and notes that today's technician has to be more of a mechanical or electrical engineer than just being able to lift heavy things. He is passionate about the program and says, "It's a real opportunity for those who want the best possible training for the best possible success." He is also very proud of its students, noting, "A lot of

our graduates have gone on to be service managers of \$5 million operations or own their own businesses. Some have continued their education and become automotive engineers."

With all the evidence of its success, the ACC automotive service technology program has certainly earned the accolades it has recently garnered, and as Viola has found, "Apprenticeship is invaluable learning, and it's vital to our overall success."

Construction Trades Apprenticeships in Florida

Seminole State College of Florida (formerly Seminole Community College), one of the nation's fastest growing two-year colleges, has six sites and an enrollment of more than 32,000. As a full-service

institution, the college offers a full array of construction programs, from apprenticeships to credit certificates to associate in science (A.S.) degrees, and bachelor's degrees. Seminole State will offer bachelor of science (B.S.) degrees in architectural engineering technology, business information management, construction and information systems technology starting this August.

Like ACC, Seminole State also offers an A.S. degree in automotive technology, and it is fully accredited by NATEF, Ford and General Motors. The program won the 2007 ACTE Award for Excellence in Automotive Training in the category of Postsecondary-Manufacturer Affiliated, and the curriculum combines the latest in automotive technology education and relevant industry experience (now referred to as internships rather than apprenticeships). This project-based approach produces graduates of the highest caliber who are ready to work.

While the automotive technology program designates its industry experiences as internships, apprenticeships are part of the construction and design programs at Seminole State. Seminole State offers apprenticeship training programs in electrical, plumbing technology and fire sprinkler systems. Postsecondary adult vocational (PSAV) programs in HVACR (heating, ventilation, air conditioning and refrigeration) and welding are also offered.

Each apprentice must complete on-the-job training and related classroom instruction. As the apprentices' skills and knowledge increase, so do their wages. The total number of hours for each of the three programs varies, and each of the certificate programs includes application-based courses and labs that encompass on-the-job training performance and proficiency.

Apprenticeship training for the commercial electrical program is provided in conjunction with local electrical subcontractors and Florida Electrical Appren-



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ticeship and Training. In the fire sprinkler apprenticeship program, training is provided in conjunction with local fire sprinkler companies and the Florida Automatic Sprinkler Training Association. The plumbing apprenticeship program utilizes local plumbing subcontractors for the on-the-job portion of the training, and all theory and technical training is provided by curriculum developed by the Plumbing Industry Professional Education Association.

Students who complete one of the apprenticeship programs will receive 18 hours of articulated credit toward Seminole State's A.S. degree in building construction. The college says this program bridges the gap from vocational training to college credit career opportunities. A student obtaining this A.S. degree will be eligible to pursue the new B.S. degree in construction from Seminole State. The college is also working on a master's degree articulation with the University of Central Florida and the University of Florida.

A Chef Apprenticeship in Louisiana

New Orleans is known as a city with some of the best food in the world, so it is only appropriate that it should be home to a thriving culinary arts program with a chef apprenticeship option. At Delgado Community College (DCC), the Chef Apprenticeship Option in Culinary Arts, Associate of Applied Science Degree, was organized by Les Chefs de Cuisine de la Louisianne, a local chapter of the American Culinary Federation Foundation, in cooperation with the Board of Trustees of the Culinary Apprenticeship Programs of Louisiana. It follows traditions of the European culinary apprenticeship programs by providing students practical work experience under the supervision of executive chefs in hotels and restaurants in metropolitan New Orleans. It is accredited by the American Culinary Federation Educational Institute Accrediting Commission, and students have the



PHOTO COURTESY OF DELGADO COMMUNITY COLLEGE

- ▲ The culinary arts program at Delgado Community College in New Orleans includes the
- ▲ Chef Apprenticeship Option in Culinary Arts, Associate of Applied Science Degree.

opportunity to earn certification.

The required courses of the chef apprenticeship program include general education credits and courses with topics such as culinary skills; food safety and sanitation; food service purchasing; nutrition; food sales, beverage and labor cost control; and restaurant and hospitality su-

pervision. The students also study baking; the theory of meat, poultry and seafood; soups, stocks and sauces; and American regional cuisine and international cuisine.

Students in the DCC program are also required to complete a minimum of 4,000 hours of on-the-job training under the supervision of an executive chef, and 900

hours of related classroom instruction under the direction of culinary arts faculty. The on-the-job training is monitored by the Bureau of Apprenticeship Training under the auspices of the federal Department of Labor and the State of Louisiana Apprenticeship Council.

Many famous chefs began as apprentices, such as Jamie Oliver, who was an apprentice in his parents' pub/restaurant. Emeril Lagasse also began learning culinary arts from his mother, and as a teenager worked at a bakery where he mastered pastry and bread making. Both men now encourage young people to enter the profession, Oliver through his Fifteen Foundation, which operates training restaurants, and Lagasse through his foundation to support children's educational programs that inspire and mentor young people through the culinary arts, nutrition, healthy eating, and important

life skills. With the inspiration of Lagasse and training such as that offered by DCC, the future of New Orleans should be just as delicious.

Building Skills for Growing Opportunities

In today's complex workplace and ever-changing economy, apprenticeships are not just for young people entering the workforce. They may also help older workers find new careers or upgrade their skills. Alabama's Calhoun Community College offers free pre-apprenticeship classes for dislocated workers who are interested in careers in the construction industry. At some community colleges, such as Washtenaw Community College in Ann Arbor, Michigan, and Rock Valley College in Rockford, Illinois, apprenticeship programs are offered in cooperation with trade unions.

There are many ways that apprenticeships are being utilized in today's CTE to help young people find a craft and acquire the skills to master it, but this traditional path also has been modernized to help adults upgrade their careers. What still remains, however, is the goal of transforming novices into masters so that valuable skills can be passed on to the next generation and continue to benefit society. **I**

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